



东北师范大学

130024

: Polygonaceae

:

Investigation on the diversity of Polygonaceae in Lu Shui He

Wang Duo , Ge Tong-tong , Qu Yao-bing , Wang Gen-yao , Wang Ya-jun ,
Xu Hong-wei , Zhao Yang , Zheng Xiao-jun

(School of Life Sciences, Northeast Normal University, Changchun
130024 ,China)

Abstract: Polygonaceae in Lu Shui He is an important constituent of the family in the northeast of Jilin Province, and even the whole Changbai Mountains. This study bases on records of the field practice all these years and analyzing diversity and distribution of Polygonaceae, in order to provide reliable data and reference for utilization, conservancy of diversity and researches in other related areas.

Key words: Polygonaceae; Lu Shui He; Diversity

Polygonaceae			APGIII	Caryophyllales	
1200			50	<i>Eriogonum</i>	240
<i>Rumex</i>	200				
	13	235	37	<i>Calligonum</i>	<i>Rumex</i>
<i>Fallopia</i>			<i>Polygonum humifusum</i> Pall. ex Ledeb		<i>Polygonum</i>
<i>aviculare</i> L.			<i>Polygonum longisetum</i> var. <i>rotundatum</i> A.J. Li		
	2				
					3-5
6	2				6-9
			2		
					1
	3	2-4	2-3	4	
				3	4
					<i>Polygonum multiflorum</i>
Thunb.			<i>Polygonum tinctorium</i> Ait.		
	<i>Fagopyrum esculentum</i> Mill.		<i>Fagopyrum tataricum</i> Gaertn		
	<i>Polygonum orientale</i> L.		<i>Polygonum persicaria</i> L.		

1.

3~6 700~900mm ≥10 2200~2800
(*Fraxinus mandshurica* Rupr.)
Phellodendron amurense Rupr. *Juglans mandshurica* Maxim.
Abies holophylla Maxim. (*Carpinus cordata*
BL.)
Pinus koraiensis Sieb.et Zucc
A. holophylla Maxim. *Taxus cuspidata* Sieb.et
Zucc. *Thuja koraiensis* Nakai
Betula costata Trautv. *Phellodendron amurense* Rupr. *Tilia amurensis* Rupr.
Ulmus japonica Rehd.) Sarg. *Ulmus laciniata* (Trautv.) Mayr
Quercus mongolica Fisch.ex Turcz. *Acer* *Acer mono* Maxim. *A.*
mandshuricum Maxim.
P. koraiensis Sieb.et Zucc (*F. mandshurica* Rupr.)
J. mandshurica Maxim. *Ph. amurense* Rupr. *U. pumila* L.
Actinidia kolomikta Maxim. *Aristolochia*
manshuriensis Kom. *Panax ginseng* C. A. Mey.
Gastrodia elata Blume *Schisandra chinensis* (Turcz) Baill
Picea jezoensis auct. non Carr. P. P. *P. koraiensis* Nakai
A. nephrolepis (Trautv.) Maxim. *Larix olgensis* A.
Henry)

2.

2.1

127°01

128°06

41°42 — 42°49

100-300

127°29

128°02

42°20 — 42°49

87

2565

78.5%

27776

2.2

110

800mm

6-8

61%

465.8mm

12-2

3% 27.4mm

36% 269.6mm

2352.5h

53%

197 218d ≥10

1900

2600

117 142d

110d

3.

4

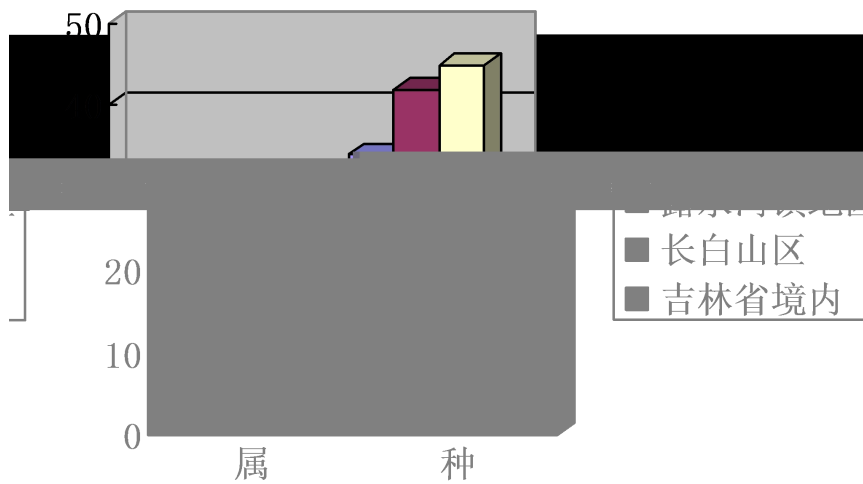
4.1



1

Tab.1: Population number of genera and species of Polygonaceae plants of Lu Shui He, Jilin Province and the comparison with those of Changbai Mountain and Northeast China.

A	3	34	11.0
B	4	42	10.5
C	6	45	9
A/B%	75%	81.0%	
A/C%	50%	75.6%	
B/C%	66.7%	93.3%	



1

Fig.1: Population number of genera and species of Polygonaceae plants of Lu Shui He, Jilin Province and the comparison with those of Changbai Mountain and Northeast China.

855.7

3 34

Rumex L. (*Fallopia* L.) (*Polygonum* L.)

6 (*R. acetosa* L.) (*R. domesticus* Hartm.) *R.*

<i>patientia</i> L. var. <i>callosus</i> F. Schmidt	(<i>R. maritimus</i> L.)	(<i>R. crispus</i> L.)
(<i>R. stenophyllus</i> var. <i>ussuriensis</i> A. Log.)		
	2	(<i>F. convolvulus</i> L.) (F.
<i>dumetosum</i> Holub)		25
(<i>P. aviculare</i> L.	(<i>P. nepalense</i> L.)	(<i>P. persicaria</i> L.)
	4	42
	3	(<i>Oxyria</i>
Hill)	(<i>Oxyria digyna</i> (L.) Hill)	
	(<i>F. dentato-alatum</i> (Fr. Schmidt) Holub.)	
(<i>P. viviparum</i> L.)	(<i>P. laxmanni</i> Lepech.)	(<i>P. ajanense</i> (Nakai) Grig.)
(<i>P. ochotense</i> V. Petr. ex Kom.)	(<i>P. dissitiflorum</i> Hemsl)	(<i>P. foliosum</i> H.
Lindberg)		3
75%		81.0%
	6	45
		37
	(<i>Fagopyrum</i>)	(<i>Fallopia</i>)
	(<i>Atraphaxis manshurica</i> Kitag.)	(F.
<i>esculentum</i> Mill.)		
		50%
75.6%		
18.74		855.7

4.2

4.2.1

1 5~6

2. 6 *Rumex* L.

2. 5

3. *Fallopia* L.

3. *Polygonum* L.

(1) *Rumex* L.

1 8
R. acetosa L.

1.

2.

3. 80
R. domesticus Hartm.

3. 80
R. patientia L. var. *callosus* F. Schmidt

2.

4. 2~4 90
R. maritimus L.

4.

5. 80
R. crispus L.

5. 60

R. stenophyllus var. *ussuriensis* A. Log.

(2) *Fallopia* L.

1

F. convolvulus L.

1.

2.

F. dumetosum (Linn.) Holub

(3)

Polygonum L.

1.

2.

1/2

20

P. aviculare L.

2.

2/3

50

P. fusco-ochreatum Kom.

1.

3.

4.

50

P. nepalense Meisn.

4.

5.

P. nepalense L.

5.

6.

7.

2

8.

50

P. hydropiper L.

P. hydropiper var. *angustifolium* A.Braun

8.

50

P. minus Huds.

7.

3

9. 50

P. posumbu Buch.-Ham.

9.

10. 50

P. roseoviride (Kitag.) Li et Chang

P. roseoviride var. *manshuricola*

10. 50

P. koreense Nakai

6.

11. 1.5

P. orientale L.

11.

12. 1

P. persicaria L.

12.

13. 1

P. viscosum Hamilt.

13

14. 60

P. bungeanum Turcz.

14. 1

P. lapathifolium L.

P. lapathifolium var. *salicifolium*

3.

15.

16. 1.5

			<i>P. limosum</i> Kom.
16	1		
			<i>P. platyphyllum</i> S. X. Li & Y. L. Chang
15.			
17.			
18.	70		
			<i>P. manshuriense</i> V. Petr. ex Kom.
18.		80	
			<i>P. pacificum</i> Petrov ex Kom.
17.			
19.			
20.			1
			<i>P. perfoliatum</i> L.
20.			1
			<i>P. senticosum</i> (Meisn.) Franch. et Sav.
19.			
21.		60	
			<i>P. sieboldii</i> Meisn.
21.			
22.		4	50
			<i>P. maackianum</i> Regel.
22		6	50
			<i>P. thunbergii</i> Sieb. et Aucc.

4.2.2

1 *Rumex* L.

6 2 3 3
6 3 1 1
3 3

2 *Fallopia* L.

5 3
8
3 3
20 7 2 6 1
3 3

3 *Polygonum* L.

5 4
8 4-7 2-3
3

5.

Tab. 2: Number of the species of Polygonaceae plants in Lu Shui he, Jilin Province and the geographical distribution of them.

1	<i>R. acetosa</i> L.			
2	<i>R. domesticus</i> Hartm.			
3	<i>R. patientia</i> L. var. <i>callosus</i> F. Schmidt			
4	<i>R. maritimus</i> L.			
5	<i>R. crispus</i> L.			
6	<i>R. stenophyllus</i> var. <i>ussuriensis</i> A. Log.			
7	<i>F. convolvulus</i> L.			
8	<i>F. dumetosum</i> (Linn.) Holub			
9	<i>P. aviculare</i> L.			
10	<i>P. fusco-ochreatum</i> Kom.			
11	<i>P. nepalense</i> Meisn.			

12	<i>P. nepalense</i> L.			
13	<i>P. hydropiper</i> L.			
14	<i>P. hydropiper</i> var. <i>angustifolium</i> A.Braun			
15	<i>P. minus</i> Huds.			
16	<i>P. posumbu</i> Buch.-Ham.			
17	<i>P. roseoviride</i> (Kitag.) Li et Chang			
18	<i>P. roseoviride</i> var. <i>manshuricola</i>			
19	<i>P. koreense</i> Nakai			
20	<i>P. orientale</i> L.			
21	<i>P. persicaria</i> L.			
22	<i>P. viscosum</i> Hamilt.			
23	<i>P. lapathifolium</i>			
24	<i>P. bungeanum</i> Turcz.			
25	<i>P. lapathifolium</i> var. <i>salicifolium</i>			
26	<i>P. limosum</i> Kom.			

27	<i>P. platyphyllum</i> S. X. Li & Y. L. Chang			
28	<i>P. manshuriense</i> V. Petr. ex Kom.			
29	<i>P. pacificum</i> Petrov ex Kom.			
	<i>P. perfoliatum</i> L.			
31	<i>P. senticosum</i> (Meisn.) Franch. et Sav.			
32	<i>P. sieboldii</i> Meisn.			
33	<i>P. maackianum</i> Regel.			
34	<i>P. thunbergii</i> Sieb. et Aucc.			

26

76.5%

6

17.6%

2

5.9%

6.

1

Fagopyrum

F. Esculentum Mill.

Fallopia L.

F. convolvulus L.

Oxyria Hill

O. Digyna (L.) Hill

Fallopia

F. multiflora (Thunb.) Harald. var. *multiflora*

(2)

[1]

[M]

2001, 6~27,

49~51,299,306

- [2] [J] 2011, 30(3):14~17
- [3] [M] 1995, 120~140
- [4] [M]. 1997,
180~183
- [5] [M]. 2003,
121~127
- [6] [M].
1985, 144~157
- [7] [M]. 2007, 106~147
- [8] [M]. 2010, 127~142
- [9] [M]. 1993, 38
- [10] [M]. 2012,
153~166
- [11] [M].
2005, 158~176
- [12] [M]. 1993,
131~143
- [13] [M].
2009, 144~148
- [14] [J]. 1985, 4
- [15] [J]. 1996, 7(3):47